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Rural Community Fire Protection

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Forest Service
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Foreword

The Rural Development Act of 1972, Title IV (Public Law 92-419) authorized the Secretary of Agriculture to develop a three-year pilot Rural Community Fire Protection Project.

In fiscal year 1975 the first appropriation of \$3.5 million was received by the Secretary of Agriculture to provide financial, technical, and other assistance to appropriate State officials. The cooperative efforts between the Federal and State forestry organizations were designed to organize, train, and equip local forces to prevent, control, and suppress fire in rural areas.

Thus, the stage was set to address this serious obstacle to the development of quality life in Rural America. Many families in rural areas of America spend their lives knowing that the material basis for their existence is unprotected and vulnerable to man's oldest enemy—uncontrolled wildfire. The hazards are real. Terrible losses in human life, livestock, wildlife, crops, manufacturing plants, industrial complexes, and second home communities are sustained each year. This report analyzes what information is available to define the rural fire problem and the experience gained during the RCFP pilot project that may lead to improvement of the quality of life in Rural America.

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Legislative History of Rural Fire Protection



The destruction caused by fires in Rural America is recorded in history books. As early as 1706, "dark days" produced by drift smoke from extensive fires in New England were recorded by early settlers. Only after the great Idaho fires of 1910 was the need for rural fire protection given proper attention. In 1911 Congress enacted the Weeks Law, which authorized Federal-State cooperation in the protection of non-Federal forests and watersheds. This Federal-State partnership was further strengthened in 1924 by the enactment of the Clarke-McNary Act.

Steady progress has been made toward the goal of adequate and efficient protection of our forest land and rangelands, and in the 1970's much has happened to alleviate the Nation's fire problems. The most comprehensive attempt to address the problem was documented in "America Burning," the 1973 report of the National Commission on Fire Prevention and Control. The National Fire Prevention and Control Administration (NFPCA) was created in 1974; matching grants and loans authorized in the Rural Development Act of 1972 were made available to improve rural fire protection capability; and since July 1973, the Farmers Home Administration has loaned \$28 million to communities for public safety facilities, which include buildings and major equipment for fire protection.

In 1975, Congress funded Title IV of the Rural Development Act (Public Law 92-419) by appropriating \$3.5 million. Under this authority, the Forest Service developed the Rural Community Fire Protection (RCFP) program, to meet the objectives of the act.

The Rural Fire Problem— A Changing Scene?

In the United States, a major socioeconomic change has occurred in the last 15 years: many city dwellers, attracted by country living, have migrated to the rural areas. Permanent and vacation dwellings have been built in many parts of the 2,200 million acres that constitute rural America, and 42 percent of the Nation's population call this area home (fig. 1). Growth trends indicate an average annual increase of 1.6 percent in rural communities.

This population increase adds a striking new dimension to an already complex fire problem.

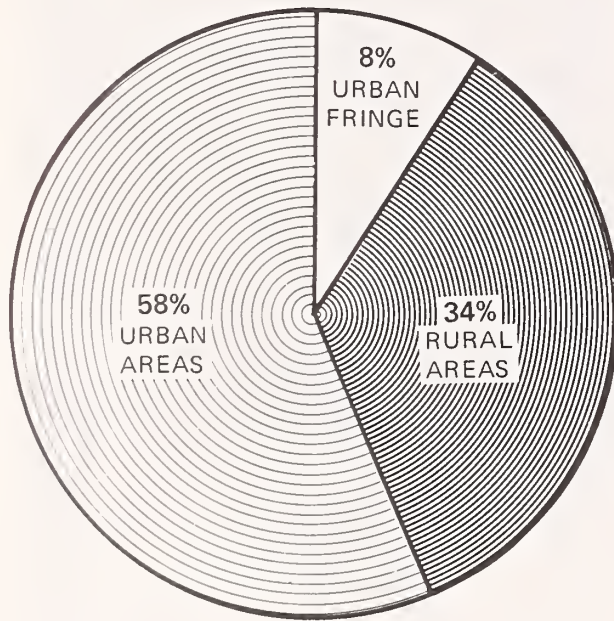
As evidenced by limited fire loss statistics, the extent of the national rural fire problem is very serious and will become worse with the growth of rural communities.

In 1970, fire losses to farm property in the United States were estimated at \$242 million, an increase of \$77 million over 1960. Total fire losses in rural America are estimated at well over \$1 billion annually.

Because the basic strength of most of the Nation's economy is raw materials—such as wood fiber, saw logs, and agricultural crops—found in rural areas, the risk of damage from fire must be minimized in order to assure an adequate flow of raw materials to manufacturing plants.



Figure 1.-- U.S. POPULATION DISTRIBUTION--
URBAN AND NONURBAN AREAS



The special burden that rural people carry is aptly expressed by the Insurance Information Institute:

When fire occurs on rural property, damage is three to six times greater on the average than when it occurs on city property. Isolation, lack of firefighting facilities in many rural areas, less rigid wiring and construction standards, and poorer heating equipment in some instances have contributed to this situation. Fire and lightning strike about two out of every 100 farms each year.

The economic losses caused by rural fires may be disastrous, but the loss of life is tragic—an estimated 4,000 deaths annually. This loss of life, plus the injuries sustained, represents a needless waste of human resources. As residents become more dispersed, existing firefighting units diminish in effectiveness. Firefighting units traveling longer distances are less likely to be effective in preventing serious property damage or loss of life. After a fire ignites, it often takes fewer than 5 minutes for deadly conditions to develop in a closed area, and 20 minutes for a major fire to develop.

If current trends continue, the growth in the rural areas of America will increase the hazard of fire, which threatens structures, wildlands, and life. How will the volunteer fire departments handle this sharp increase?

Rural Fire Protection- A Status Report

Current rural fire protection does not provide the protection necessary to minimize social and economic impacts of fires, especially in the light of increased investment in manmade improvements and agricultural, forest, and community resources. Data collected during the pilot study indicate major deficiencies in rural fire services, including lack of adequate protection for over 125 million acres of rural lands.

In the majority of rural areas, fire protection—if it exists at all—is provided by volunteer fire departments. Although abundant in spirit, these units rarely have the equipment or training to combat effectively and safely the estimated 400,000 fires that occur annually in rural structures and wildlands. Published surveys indicate that rural fire departments have fewer hoses, smaller pumping engines, and less breathing apparatus than recommended by recognized national standards. In many communities, firefighters must pay for protective equipment from their own pockets, and fire stations and equipment are often heavily financed by public donations. The need for training and equipment is especially acute where poverty is prevalent in the community.

Pilot program data reveal the existence of 26,168 rural fire departments and about 20,000 rural fire places without fire protection. Of these potential 46,168 fire departments, approximately 26,000 were identified as needing assistance in *organizing, training, and equipping* rural fire fighting forces to meet recommended State standards for fire protection.



Organizing

A master fire plan is critical in *organizing* fire protection for an area, but only about 10 percent of the 26,168 rural communities with existing fire departments currently have satisfactory master fire plans. The obvious first step is to help communities define their fire problems and then encourage them to initiate solutions. The degree of protection needed in the 20,000 places currently without protection is not known.

Training

Properly developed and maintained *training* is also basic to a fire protection system. A study by the National Fire Prevention and Control Administration shows that 1.4 million volunteer firemen fighters are in need of training to maintain qualifications standards. Because of the volunteer aspects of the rural fire program, unique approaches must be developed to insure maximum knowledge transfer with minimum impact on trainees' personal time. The additional problem of frequent volunteer turnover creates a necessity for training programs that can be sustained at the local level.

Equipping

In rural areas, *equipment* is usually obsolete, poorly designed to meet fire suppression needs, or nonexistent. Pilot planning efforts in Tennessee, Oklahoma, and Nevada identified the deplorable status of equipment in rural communities. Fire engines (trucks), firefighter protective clothing, breathing apparatus, and communications equipment lead the list of most needed items. A study compiled by the East Tennessee Development District, which encompasses 12 counties, stated that "poor communications cause the single largest unnecessary delay in response."

Rural Community Fire Protection Pilot Program—A Step Into The Future

The Secretary of Agriculture delegated the authority for administering Title IV of the Rural Development Act to the Chief of the Forest Service. The Forest Service, plus an ad hoc committee of State Foresters representing the National Association of State Foresters, moved swiftly to draft guidelines to meet the intent of the legislation and provide the basis for allocation and expenditure of funds.

Applications for project proposals were accepted by State Foresters from county governments and individual volunteer fire departments. Following established guidelines, applications were reviewed, and selected projects were approved by State forestry organizations. A landslide response to the program provided many more proposed projects than could be funded with existing funds.

The State forestry organizations administered the program and provided technical assistance to volunteer fire departments in organizing, training, and equipment selection. The Forest Service role included program guidance, funding coordination, and audit, in addition to technical assistance.

In 1975, the first year of the pilot program, \$3.5 million was made available to volunteer fire departments for organizing, training, and equipment purchasing. In fiscal years 1976 and 1977, 5 and 10 percent of the appropriations were authorized for use in program administration and technical assistance by the Forest Service and State forestry organizations, respectively. However, because of the vital needs of the volunteer fire departments, many States chose not to use the administrative allowance and made the total State allotment available to volunteer fire departments.



**Figure 2.-- FUND ALLOCATIONS BY STATE
TOTAL DOLLARS RECEIVED
FISCAL YEAR 1975, 1976, AND T.Q.***



*Transition Quarter

The program appropriation was distributed among the States and territories (fig. 2) by a formula based on number of communities under 10,000 population, potential for damage, and other factors such as land use classification.

In fiscal year 1975, 5,684 applications were received and \$38,761,672 requested (fig. 3). The need for this type of technical and financial assistance was emphasized by the response of rural communities to the pilot program (fig. 4).

Working within existing manpower ceilings and severe time constraints because of the late release of Federal funds, State forestry organizations did an outstanding job of using the program effectively to meet priority needs and of acting as a catalyst in communities to increase efforts to improve firefighting.

Organizing

The pilot program established 120 new rural fire departments in the first 2 years. Charters, mutual aid agreements, fire prevention and control master plans, and financial arrangements are a few of the preparations necessary to establish an effective fire service. The pilot program increased awareness of the need for organization of the fire departments. However, most areas felt compelled to bring equipment and training up to minimal standards in existing departments rather than make a major thrust to organize new departments.

Training

Training is a continuing need. Personnel in volunteer fire departments change frequently, and new technology is constantly

being developed. Analyzing training needs, formulating training plans, developing training materials, and scheduling the training sessions are major challenges in many areas.

Close cooperation with State Fire Marshalls and State Departments of Education and concentrated efforts by qualified State forestry personnel aided greatly in the success of this aspect of the pilot program.

Over 28,000 rural firefighting personnel were trained in basic and advanced fire suppression techniques during the first 2 years of the program. This program, however, was only a beginning in providing the training needed to assure an effective rural fire program—current estimates indicate that 200,000 rural firefighters still need some type of training annually. Federal and State agencies are currently developing joint long-range programs to improve training program efficiency and to reduce duplication of efforts.

Equipping

Lack of proper equipment in rural fire services is a critical problem. In order to use existing programs as much as possible to maximize the benefits received from the RCFP funds, the Forest Service, in cooperation with the General Services Administration, arranged for the use of Federal Excess Property in the rural fire program. Over 1,000 excess military trucks and tankers were converted to firefighting apparatus and loaned to rural fire departments through the State forestry organizations. The cost of converting many of these vehicles to fire apparatus was an effective use of the RCFP program funds. For approximately 10 percent of the cost of new vehicles, the volunteer fire departments

Figure 3.-- NUMBER OF APPLICATIONS RECEIVED AND TOTAL FUNDING REQUESTED

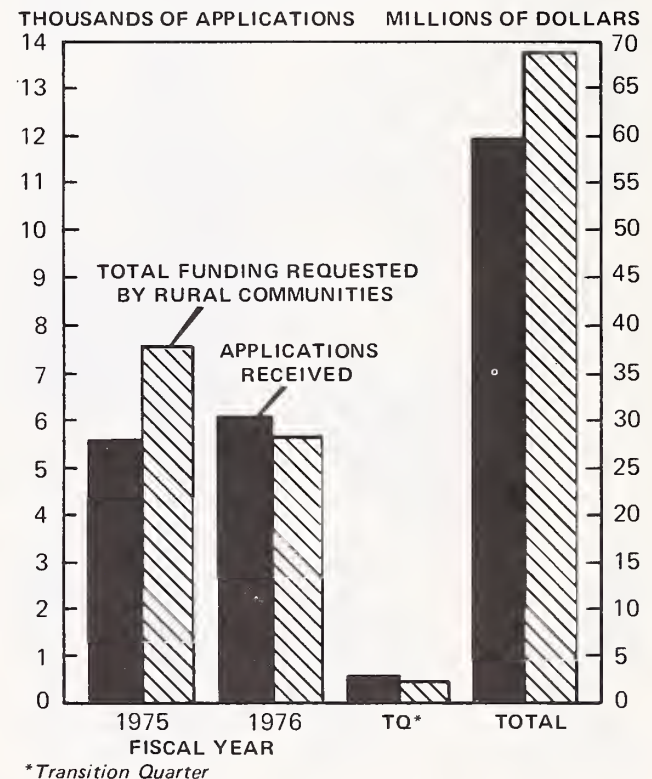
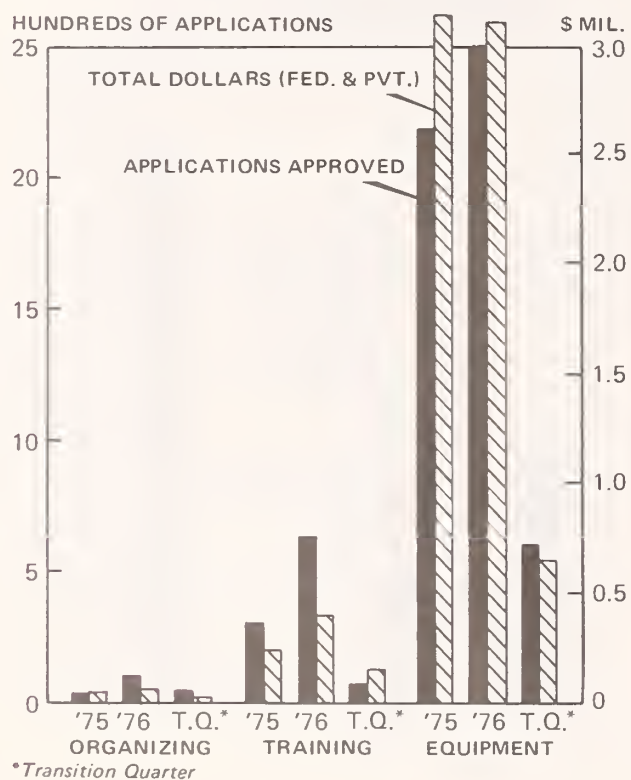


Figure 4.-- TOTAL APPLICATIONS APPROVED
BY PROGRAM AREA AND YEAR



were able to upgrade their fire suppression capability. Excess property can give rural areas increased protection and improved opportunities to train firefighters more than any other use of limited program funds, but unfortunately supplies are becoming more limited and difficult to procure.

The RCFP program has proved to be very compatible with the Cooperative Fire Protection Program authorized under the Clarke-McNary Act. Equipment acquired for these programs creates a pool of fire suppression resources that can be used to combat wildland and structural fires in nonmetropolitan areas. Although the Clarke-McNary program is limited to forests and nonforested watersheds, there is a mutual sharing of fire control problems. Strengthened community capability is needed in order to provide effectively the most economical protection available.

The majority of the applications approved during the RCFP pilot program were for equipment acquisitions. In addition to the excess military property, fire apparatus, self-contained breathing units, protective clothing and communications equipment were purchased with the RCFP funds, as shown in the following tabulation:

Type of Equipment	Amount	
	FY 1975	FY 1976
Rolling stock (trucks and trailers)	\$ 843,424	\$ 476,172
Other (protective clothing, communications, etc.)	\$1,906,804	\$1,204,179

Design for The Future

The results of the pilot project are encouraging; however, it is only a meager start. The pilot Rural Community Fire Protection program has substantiated the need for the following future actions to strengthen rural fire protection.

Organizing

1. Accelerate the development and implementation of current statistical fire reporting systems to enable the identification of specific rural fire problem areas.
2. Support actively the development of statewide Rural Fire Master Plans that will improve the utilization of available resources and channel funding support into priority areas to insure maximum efficiency of the protection system.
3. Develop well-balanced programs, on the local levels, that provide for prevention, training, and equipment that is adequate to protect the values threatened by fire.
4. Provide technical assistance to State and local firefighting organizations for the application of research and equipment development technology to local fire-related problems.

Training

1. Provide State and local coordination for sustained basic and advanced innovative training programs based on the latest technology. In many States the State Fire Marshall, State Forester, and Director of Education have made excellent progress in developing active fire training programs utilizing all resources available within the State.



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2. Institute national coordination of the development of basic educational packages in order to reduce duplication of effort and maximize the economies available through volume reproduction of training materials.
 3. Improve the qualifications of rural volunteer firemen through self-study or centralized training programs at the local level.

Equipping

1. Continue to improve rural fire suppression equipment to a maintenance level through well-planned replacement programs and the maximum utilization of Federal Excess Military property.
2. Develop fire prevention, life safety, and fire suppression systems (i.e., automatic residential sprinkler systems) that meet the needs of isolated rural areas where conventional fire department approaches to protection are not economically feasible.

Prevention

1. Develop public education programs that increase the awareness of rural populations to the hazards and risks of fire.
2. Institute aggressive programs to place fire alarm systems (smoke detectors) and/or "self help" suppression systems in all rural homes and structures.
3. Develop balanced fire prevention program campaign guides for use of volunteer fire departments in rural areas.
4. Develop wildland fuel management programs that reduce the fuel hazard in rural areas.

Notes

